

**Louisiana Department of Environmental Quality (LDEQ)
Office of Environmental Services**

STATEMENT OF BASIS

Southwestern Electric Power Co
Lieberman Power Plant
Mooringsport, Caddo Parish, Louisiana
Agency Interest Number: 584
Activity Number: PER20080002
Proposed Permit Number: 0500-00007-V2

I. APPLICANT

Company:

Southwestern Electric Power Co (SWEPCO)
2400 FM Rd 3251
Hallsville, Texas 75650-0218

Facility:

Lieberman Power Plant
11730 Hwy 538
Mooringsport, Caddo Parish, Louisiana
511490 mE 3599845mN

II. FACILITY AND CURRENT PERMIT STATUS

The Lieberman Power Plant is an existing power plant facility that is owned by the Southwestern Electric Power Company (SWEPCO). The Lieberman Power Plant currently operates under Permit No. 0500-00007-V1, issued August 19, 2003.

This is the Part 70 operating permit renewal for the facility.

III. PROPOSED PROJECT/PERMIT INFORMATION

Application

A permit application and Emission Inventory Questionnaire were submitted by SWEPCO on February 7, 2008, requesting a renewal of the Part 70 operating permit.

SWEPCO is also requesting an initial Clean Air Interstate Rule (CAIR) permit and an Acid Rain permit renewal.

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Project

The Lieberman Power Plant generates electricity using four boilers (Units #1, #2, #3, and #4). Units #1 and #2 burn natural gas while Units #3 and #4 burn both natural gas and fuel oils No. 2, No. 4, and No. 6. The operating schedule of the boilers is varied from standby to 24 hours per day. The power plant also has two fuel oil storage tanks, a gasoline tank, and an emergency diesel fire pump.

Changes in emissions are due to the removal of fuel oil as an alternative fuel for Units #1 and #2, and the addition of wastewater emissions resulting from chemically cleaning the boilers.

Permitted Air Emissions

Estimated emissions in tons per year are as follows:

Pollutant	Before	After	Change
PM ₁₀	930.40	727.27**	- 203.13
SO ₂	10591.00	7978.85	- 2612.15
NO _x	4996.00	3406.70*	- 1589.30
CO	540.00	439.45	- 100.55
VOC	78.36	78.43	+ 0.07

*Includes startup/shutdown emissions for Units #3 and #4.

**Includes 44 hours per year of wastewater emissions from Boiler Units 3 or 4 (EQT3 or EQT4) resulting from chemically cleaning the boilers (2 boilers per year) in order to improve heat transfer efficiency.

IV REGULATORY ANALYSIS

The applicability of the appropriate regulations is straightforward and provided in the Specific Requirements section of the proposed permit. Similarly, the Monitoring, Reporting and Recordkeeping necessary to demonstrate compliance with the applicable terms, conditions and standards are also provided in the Specific Requirements section of the proposed permit.

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Applicability and Exemptions of Selected Subject Items

Table 1. Applicable Louisiana and Federal Air Quality Requirements

ID No.:		LAC 33:III. Chapter																		
		5 ^A	509	9	11	13	15	2103	2104*	2107	2111	2113	2121	2131	22	29*	51*	53*	56	59*
UNF1	Lieberman Power Station	1		1													2		1	3
01	Boiler Unit #1		3	1	1	1	3													
02	Boiler Unit #2		3	1	1	1	3													
03	Boiler Unit #3		3	1	1	1	3													
04	Boiler Unit #4		3	1	1	1	3													
05	Fuel Oil Storage Tank A							3			3	1								
06	Fuel Oil Storage Tank B							3			3	1								
07	Gasoline Storage Tank							2				1		2						
08	Fugitives											3	1	3						
DFP	Emergency Diesel Fire Pump			1	1	1	3													

* The regulations indicated above are State Only regulations.

▲ All LAC 33:III Chapter 5 citations are federally enforceable including LAC 33:III.501.C.6 citations, except when the requirement found in the "Specific Requirements" report specifically states that the regulation is State Only.

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KEY TO MATRIX

- 1 - The regulations have applicable requirements that apply to this particular emission source.
- The emission source may have an exemption from control stated in the regulation. The emission source may not have to be controlled but may have monitoring, recordkeeping, or reporting requirements.
- 2 - The regulations have applicable requirements that apply to this particular emission source but the source is currently exempt from these requirements due to meeting a specific criterion, such as it has not been constructed, modified or reconstructed since the regulations have been in place. If the specific criteria changes the source will have to comply at a future date.
- 3 - The regulations apply to this general type of emission source (i.e. vents, furnaces, towers, and fugitives) but do not apply to this particular emission source.

Blank - The regulations clearly do not apply to this type of emission source.

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Table 2. Applicable Louisiana and Federal Air Quality Requirements

ID No.:	Description	40 CFR 60 NSPS									40 CFR 63		40 CFR						
		A	K	Ka	Kb	D	Dc	GG	KKK	III	A	ZZZZ	64	68	72	73	75	77	78
UNF1	Lieberman Power Station	1									1								
01	Boiler Unit #1					3									3	3	3	3	3
02	Boiler Unit #2					3									3	3	3	3	3
03	Boiler Unit #3					3									1	1	1	2	2
04	Boiler Unit #4					3									1	1	1	2	2
05	Fuel Oil Storage Tank A				3														
06	Fuel Oil Storage Tank B				3														
07	Gasoline Storage Tank				3														
08	Fugitives																		
DFP	Emergency Diesel Fire Pump									1		1							

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Table 3. Explanation for Exemption Status or Non-Applicability of a Source		
ID No:	Requirement	Notes
UNF1 Facility wide	LAC 33:III.Chapter 51	EXEMPT. Electric utility steam-generating units are exempt from the requirements of this chapter.
	Chemical Accident Prevention Provision [40 CFR 68; LAC 33:III.Chapter 59]	DOES NOT APPLY. Threshold quantities are not exceeded.
01, 02, 03, and 04, Boilers	NSPS Subpart D – Standards of Performance for Fossil-Fuel-Fired Steam Generators [40 CFR 60.40]	DOES NOT APPLY. Boilers were in operation by 1969 and have not been modified.
01 and 02 Boilers	Emission Standards for Sulfur Dioxide [LAC 33:III.1503]	DOES NOT APPLY. Units emit less than 250 tons of SO ₂ per year.
	Acid Rain Program [40 CFR Parts 72-78]	DOES NOT APPLY. Boilers are not listed in Table 2 of 40 CFR 73 and are not subject to the Acid Rain provisions of 40 CFR Parts 72 – 78.
05 and 06 Fuel Oil Tanks	NSPS Subpart Kb – Standards of Performance for Volatile Organic Liquid Storage Vessels [40 CFR 60.110(b)]	DOES NOT APPLY. Tank construction prior to July 23, 1984.
	Storage of Volatile Organic Compounds [LAC 33:III.2103]	DOES NOT APPLY. Vapor pressure < 1.5 psia.
07	NSPS Subpart Kb – Standards of Performance for Volatile Organic Liquid Storage Vessels [40 CFR 60.110(b)]	DOES NOT APPLY. Volume < 10,000 gallons.

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Table 3. Explanation for Exemption Status or Non-Applicability of a Source		
ID No:	Requirement	Notes
Gasoline Storage Tank	Filling of Gasoline Storage Vessels [LAC 33:III.2131]	EXEMPT. Facility is in an attainment area.
Fugitives	Pumps and Compressors [LAC 33:III.2111]	DOES NOT APPLY. True vapor pressure of fuel oil is < 1.5 psia.
	Fugitive Emission Control [LAC 33:III.2121]	DOES NOT APPLY. This rule is not applicable to the electric utility industry.

The above table provides explanation for both the exemption status or non-applicability of a source cited by 1, 2 or 3 in the matrix presented in Section X (Table 1) of this permit.

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Prevention of Significant Deterioration/Nonattainment Review

PSD does not apply.

Streamlined Equipment Leak Monitoring Program

Unit or Plant Site	Program Being Streamlined	Stream Applicability	Overall Most Stringent Program
Lieberman Power Plant	-	-	-

MACT Requirements

MACT does not apply.

Air Quality Analysis

Emissions associated with the proposed facility were reviewed by the Air Quality Assessment Division to ensure compliance with the NAAQS and AAS. LDEQ did not require the applicant to model emissions.

General Condition XVII Activities

The facility will comply with the applicable General Condition XVII Activities emissions as required by the operating permit rule. However, General Condition XVII Activities are not subject to testing, monitoring, reporting or recordkeeping requirements. For a list of approved General Condition XVII Activities, refer to the Section VIII – General Condition XVII Activities of the proposed permit.

Insignificant Activities

All Insignificant Activities are authorized under LAC 33:III.501.B.5. For a list of approved Insignificant Activities, refer to the Section IX – Insignificant Activities of the proposed permit.

V. PERMIT SHIELD

A permit shield was not requested.

VI. PERIODIC MONITORING

The Lieberman Power Plant will monitor Units # 3 and # 4 for sulfur dioxide, nitrogen oxides, carbon dioxide and opacity continuously using a continuous emission monitor and a continuous opacity monitor as specified in 40 CFR 75.62(a).

VII. GLOSSARY

Carbon Monoxide (CO) – A colorless, odorless gas, which is an oxide of carbon.

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Maximum Achievable Control Technology (MACT) – The maximum degree of reduction in emissions of each air pollutant subject to LAC 33:III.Chapter 51 (including a prohibition on such emissions, where achievable) that the administrative authority, upon review of submitted MACT compliance plans and other relevant information and taking into consideration the cost of achieving such emission reduction, as well as any non-air-quality health and environmental impacts and energy requirements, determines is achievable through application of measures, processes, methods, systems, or techniques.

Hydrogen Sulfide (H₂S) – A colorless inflammable gas having the characteristic odor of rotten eggs, and found in many mineral springs. It is produced by the reaction of acids on metallic sulfides, and is an important chemical reagent.

New Source Review (NSR) – A preconstruction review and permitting program applicable to new or modified major stationary sources of air pollutants regulated under the Clean Air Act (CAA). NSR is required by Parts C (“Prevention of Significant Deterioration of Air Quality”) and D (“Nonattainment New Source Review”).

Nitrogen Oxides (NO_x) – Compounds whose molecules consist of nitrogen and oxygen.

Organic Compound – Any compound of carbon and another element. Examples: Methane (CH₄), Ethane (C₂H₆), Carbon Disulfide (CS₂)

Part 70 Operating Permit – Also referred to as a Title V permit, required for major sources as defined in 40 CFR 70 and LAC 33:III.507. Major sources include, but are not limited to, sources which have the potential to emit: ≥ 10 tons per year of any toxic air pollutant; ≥ 25 tons of total toxic air pollutants; and ≥ 100 tons per year of regulated pollutants (unless regulated solely under 112(r) of the Clean Air Act) (25 tons per year for sources in non-attainment parishes).

PM₁₀ – Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured by the method in Title 40, Code of Federal Regulations, Part 50, Appendix J.

Potential to Emit (PTE) – The maximum capacity of a stationary source to emit any air pollutant under its physical and operational design.

Prevention of Significant Deterioration (PSD) – A New Source Review permitting program for major sources in geographic areas that meet the National Ambient Air Quality Standards (NAAQS) at 40 CFR Part 50. PSD requirements are designed to ensure that the air quality in attainment areas will not degrade.

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Sulfur Dioxide (SO₂) – An oxide of sulfur.

Sulfuric Acid (H₂SO₄) – A highly corrosive, dense oily liquid. It is a regulated toxic air pollutant under LAC 33:III.Chapter 51.

Title V Permit – See Part 70 Operating Permit.

Volatile Organic Compound (VOC) – Any organic compound, which participates in atmospheric photochemical reactions; that is, any organic compound other than those, which the administrator of the U.S. Environmental Protection Agency designates as having negligible photochemical reactivity.